

ABSTRACT

A battery having at least one group of electric power-generating elements each comprising at least a positive electrode, a negative electrode and a separator; and a battery case containing the group of electric power-generating elements. The battery case is formed from a mixture which includes a matrix material selected from the group consisting of plastics, polymers, resins or combinations thereof. The mixture further includes a thermally conductive, electrically insulating material distributed throughout the matrix material. The thermally conductive material has a thermal conductivity at least one order of magnitude higher than the thermal conductivity of the matrix material. The present invention also includes battery cases (lids and containers) used in making the batteries and formed of the mixture.